

10/513699

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NEWS 12 MAY 11 BEILSTEIN substance information now available on
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NEWS 15 MAY 28 CAS databases on STN enhanced with NANO super role in
records back to 1992
NEWS 16 JUN 01 CAS REGISTRY Source of Registration (SR) searching
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and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 15:08:14 ON 12 JUN 2009

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.22	0.22

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STRUCTURE FILE UPDATES: 10 JUN 2009 HIGHEST RN 1155458-91-5
DICTIONARY FILE UPDATES: 10 JUN 2009 HIGHEST RN 1155458-91-5

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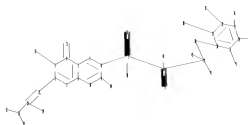
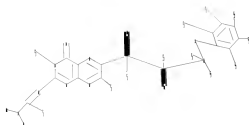
TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when
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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
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=>
Uploading C:\Program Files\Stnexp\Queries\10579106thioether.str



```

chain nodes :
11 12 13 14 15 17 19 26 27 28 29 30 31 32 34 35 36 37 38 39 41
42 43 44
ring nodes :
1 2 3 4 5 6 7 8 9 10 20 21 22 23 24 25
chain bonds :
2-27 3-17 4-11 8-12 9-44 12-13 12-14 12-39 14-15 14-19 14-41 19-26
19-42 19-43 20-26 21-38 22-37 23-36 24-35 25-34 27-28 28-29 28-30 30-31
30-32
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 20-25 20-21 21-22 22-23
23-24 24-25
exact/norm bonds :
1-2 1-6 2-3 2-27 3-4 3-17 4-5 4-11 9-44 12-13 12-39 14-15 14-19 14-41
19-26 19-42 19-43 20-26 21-38 22-37 23-36 24-35 25-34 27-28 28-29 28-30
30-31 30-32
exact bonds :
8-12 12-14
normalized bonds :
5-6 5-7 6-10 7-8 8-9 9-10 20-25 20-21 21-22 22-23 23-24 24-25
isolated ring systems :
containing 1 : 20 :

```

G1:C,H

```

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 17:CLASS 19:CLASS 20:Atom
21:CLASS 22:Atom 23:Atom 24:Atom 25:Atom 26:CLASS 27:CLASS 28:CLASS
29:CLASS 30:CLASS 31:CLASS 32:CLASS 34:CLASS 35:CLASS 36:CLASS 37:CLASS
38:CLASS 39:CLASS 41:CLASS 42:CLASS 43:CLASS 44:CLASS

```

L1 STRUCTURE UPLOADED

=> s 11

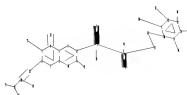
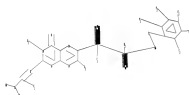
GENERIC GROUP NOT VALID HERE

Generic groups may not be used in these circumstances:

1. Any generic group node (e.g., Hy) in a ring.
2. An Ak node attached to another Ak node.
3. An Ak node with three or more attachments where one or more of the attachments is to a C node.

=>

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chain nodes :

11 12 13 14 15 17 19 26 27 28 29 30 31 32 34 35 36 37 38 39 41
42

ring nodes :

1 2 3 4 5 6 7 8 9 10 20 21 22 23 24 25

chain bonds :

2-27 3-17 4-11 8-12 9-42 12-13 12-14 12-39 14-15 14-19 14-41 19-26
20-26 21-38 22-37 23-36 24-35 25-34 27-28 28-29 28-30 30-31 30-32

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 20-25 20-21 21-22 22-23
23-24 24-25

exact/norm bonds :

1-2 1-6 2-3 2-27 3-4 3-17 4-5 4-11 9-42 12-13 12-39 14-15 14-19 14-41
19-26 20-26 21-38 22-37 23-36 24-35 25-34 27-28 28-29 28-30 30-31 30-32

exact bonds :

8-12 12-14

normalized bonds :

5-6 5-7 6-10 7-8 8-9 9-10 20-25 20-21 21-22 22-23 23-24 24-25

isolated ring systems :

containing 1 : 20 :

10/513699

G1:C,H

Match level :

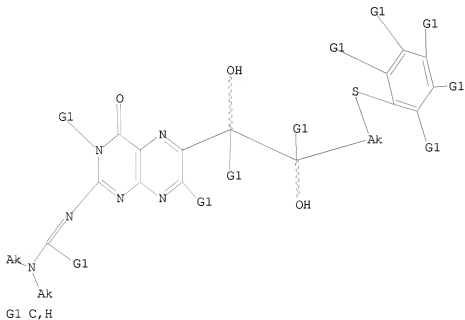
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 17:CLASS 19:CLASS 20:Atom
21:CLASS 22:Atom 23:Atom 24:Atom 25:Atom 26:CLASS 27:CLASS 28:CLASS
29:CLASS 30:CLASS 31:CLASS 32:CLASS 34:CLASS 35:CLASS 36:CLASS 37:CLASS
38:CLASS 39:CLASS 41:CLASS 42:CLASS

L2 STRUCTURE UPLOADED

=> d l2

L2 HAS NO ANSWERS

L2 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l2 full

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FULL SEARCH INITIATED 15:10:14 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 10 TO ITERATE

100.0% PROCESSED 10 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

L3

1 SEA SSS FUL L2

<12/04/2007>

Erich Leese

10/513699

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
186.84	187.06

FULL ESTIMATED COST

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FILE LAST UPDATED: 11 Jun 2009 (20090611/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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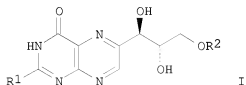
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3 full
L4 1 L3

=> d ibib abs hitstr
THE ESTIMATED COST FOR THIS REQUEST IS 5.64 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:472157 CAPLUS
 DOCUMENT NUMBER: 143:7534
 TITLE: Preparation of tetrahydrobiopterin and analogs of tetrahydrobiopterin
 INVENTOR(S): Moser, Rudolf; Groehn, Viola; Schumacher, Andreas; Martin, Pierre
 PATENT ASSIGNEE(S): Biomarin Pharmaceutical Inc., USA; Merck Eprova A.-G.
 SOURCE: PCT Int. Appl., 55 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005049614	A2	20050602	WO 2004-US38313	20041117
WO 2005049614	A3	20070308		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004290692	A1	20050602	AU 2004-290692	20041117
CA 2545484	A1	20050602	CA 2004-2545484	20041117
EP 1776364	A2	20070425	EP 2004-819154	20041117
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LT, LV, MK, YU				
JP 2007534637	T	20071129	JP 2006-539994	20041117
US 20070244322	A1	20071018	US 2007-579106	20070216
PRIORITY APPLN. INFO.:				P 20031117
				US 2003-520367P
				P 20031117
				US 2003-520368P
				W 20041117
				WO 2004-US38313
OTHER SOURCE(S):	CASREACT 143:7534; MARPAT 143:7534			
GI				



AB A process for the preparation of tetrahydrobiopterin and its analogs, e.g. I
 [R1 = alkylamino, arylamino, alkylthio, alkylaminomethyleneimino, R2 = H;
 R1 = alkylamino, alkylthio, Me2NCH2N, R2 = Me2CHET2Si, (Me3CO)Ph2Si,

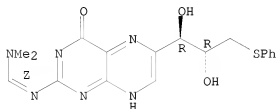
MePh2Si, Me3CMe2Si, Me3C(MeO)PhSi, (Me3C)2MeSi, etc.], from neopterin and/or 6-substituted pterins with an improved yield and a high stereoselectivity is disclosed. Also disclosed herein are novel individual intermediates prepared in the preparation of tetrahydrobiopterin, such as selectively protected neopterin useful for the preparation of tetrahydrobiopterin. As an example, L-neopterin was reacted with DMF-acetal to give the 2-(dimethylamino)methylene derivative I (R1 = Me2NCH2N, R2 = H) (II). II was then silylated to I (R2 = Me3CPh2Si) which could be deprotected to I (R1 = NH2).

IT 852547-49-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of tetrahydrobiopterin and analogs)

RN 852547-49-0 CAPLUS

CN Methanimidamide, N'-[6-[(1R,2R)-1,2-dihydroxy-3-(phenylthio)propyl]-1,4-dihydro-4-oxo-2-pteridiny]-N,N-dimethyl-, (1Z)- (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



10/513699

=> d his

(FILE 'HOME' ENTERED AT 15:08:14 ON 12 JUN 2009)

FILE 'REGISTRY' ENTERED AT 15:08:28 ON 12 JUN 2009

L1 STRUCTURE UPLOADED

L2 STRUCTURE UPLOADED

L3 1 S L2 FULL

FILE 'CAPLUS' ENTERED AT 15:10:22 ON 12 JUN 2009

L4 1 S L3 FULL

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

6.14

193.20

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

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